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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/772,617 01/30/01 BANNING

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EXAMINER

WRIGHT, S

ART UNIT

PAPER NUMBER

1626

DATE MAILED:

10/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/772,617

Applicant(s)

BANNING ET AL.

Examiner

Sonya Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 44-66 is/are pending in the application.
- 4a) Of the above claim(s) 10-66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claims 1-19 and 44-66 are pending in this application.

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-19 in Paper No. 4 is acknowledged.

The traversal is on the ground(s) that Groups III, IV, and V can be examined together with the Group I claims without undue burden since all recite similar compositions and because the patent classification system has been developed primarily for convenience, and separate classifications within this system is not indicative of distinctiveness for the purposes of a restriction requirement. This is not found persuasive because Groups I-V are distinct, each from the other, because they differ in structure and/or element so as to be patentably distinct, and a prior art reference anticipating but one of the groups would not render obvious the other groups under 35 U.S.C. 103 (MPEP 806.04(f)). Each group is capable of supporting its own patent. Examination of more than one of the above groups would be an undue burden as it would require additional search in both the patent and non-patent literature.

The examiner further restricted claims 1-19 into the following groups:

Group I. Claims 1-9,

Group II. Claims 10-15, and

Group III. Claims 16-19.

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In a telephone conversation on October 9, 2001, Mrs. Byorick elected Group I, claims 1-9, and in a separate phone conversation Mrs. Byorick elected the compound of claim 7.

The restriction requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,647,675, Mayer et al.; STN International R CAPLUS Database, Accession No. 1975: 516012, Schein (abstract).

Determination of the scope and content of the prior art (MPEP §2141.01)

Mayer et al. teach xanthene compounds for use in dyeing paper stocks. Schein teaches xanthene compounds for use as colorants. Applicants disclose xanthene compounds for use as colorants. Mayer et al. teach compounds that are similar to Applicants compounds in column 1, lines 1-35 and the abstract. Mayer et al. teach compounds that are similar to Applicants compounds when, in the instant compounds of claim 8, R3, R4, R5 and R6 are selected from the group consisting of hydrogen and carbon containing materials and can be the same or different than one another, Z is nitrogen, and R80-R88 are selected from the group consisting of hydrogen and alkyl.

Schein teaches compounds that are similar to Applicants compounds when, in the instant compounds of claim 8, R3, R4, R5 and R6 are selected from the group consisting of hydrogen and carbon containing materials and can be the same or different than one another, Z is oxygen, and R80-R88 are selected from the group consisting of hydrogen and alkyl.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Applicant discloses a genus that embraces the compounds of Mayer et al. See column 1, lines 1-35 and 36-58. Additionally, Mayer et al. teaches species which are homologs of Applicant's compounds. See column 5, lines 20-60. Applicants disclose that in the compound of claim 8, n is at least 12, meaning that the alkyl chain consists of at least 13 methyl groups. In column 5, lines 20-60, Mayer et al. teaches examples wherein R₂ consists of alkyl groups of various chain lengths, none of which, however, are alkyl chains of at least 13 methyl groups. Lastly, Mayer et al. teaches a tautomer of Applicants compounds, see column 1, formula, wherein the xanthene contains a positively charged nitrogen substituent.

Schein teaches a homolog of the instant compounds. Applicants disclose that in the compound of claim 8, n is at least 12, meaning that the alkyl chain consists of at least 13 methyl groups. The compound of Schein differs from Applicants compounds because Schein teaches an alkyl group in a corresponding position which consists of only two methyl groups (ethyl).

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

To those skilled in chemical art, one homolog is not such an advance over adjacent member of series as requires invention because chemists knowing properties of one member of series would in general know what to expect in adjacent members. In re Henze, 85 USPQ 261 (1950). The instant claimed compounds would have been obvious because one skilled in the art would have been motivated to prepare homologs of the compounds taught in Mayer et al. and Schein with the expectation of obtaining compounds which could be used in colorants. Therefore, the instant claimed

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compounds would have been suggested to one skilled in the art. Applicants should note that in column 1, lines 36 and 37, Mayer et al. generically teach that R2 can be C1-C13 alkyl.

Further, one would be motivated to prepare compounds under the genus of Mayer et al. and tautomers of the compounds of Mayer et al. in the expectation that all compounds under the genus and those with that are similar in structure would be useful in colorants.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The term "chromophore" in claim 1, line 3, is not defined in the specification so as to ascertain the structures of the compounds that are included and/or excluded by the term. Therefore, the specification failed to provide adequate support for claims 1-9, as written.

The specification on page 6, lines 13-18, lists preferred chromophores and examples of chromophores. However, the list is not comprehensive — it does not consist of all chromophores encompassed in claim 1. Therefore, the specification fails

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to provide adequate support for claim 1-9 as written. By including in claim 1 the chromophores listed on page 6, lines 16-18 of the specification, the rejection would be overcome. Applicants should note that the introduction of new subject matter, i.e. chromophores beyond those disclosed, into the specification will raise the issue of new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

In claim 1, line 4, after "the segment Z", "comprises" should be changed to --is selected from-- for proper Markush language

Claim 3 recites the limitation " wherein the segment $Z(CH_2)_nCH_3$ is $NH(CH_2)_nCH_3$ ". There is insufficient antecedent basis for this limitation in the claim. Claim 3 is dependent on claim 1. Claim 1 defines Z as comprising "one or more of C, O, N, and S". This definition of Z is broad and confusing.

Claim 4 recites the limitation " wherein the segment $Z(CH_2)_nCH_3$ is $CH_3(CH_2)_nN-(CH_2)_yCH_3$ ". There is insufficient antecedent basis for this limitation in the claim. Claim 4 is dependent on claim 1. Claim 1 defines Z as comprising "one or more of C, O, N, and S". This definition of Z is broad and confusing.

Claims 6-9 each recite the limitation of-- a compound having the formula of the structure shown. There is insufficient antecedent basis for this limitation in the claims.

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In claim 1, R1 is broadly described as "comprising a chromophore". The specification fails to define the term chromophore so that one skilled in the art may ascertain structures of compounds of R1, therefore claims 6-8, which are dependent on claim 1, lack antecedent basis.

Claim Objections

Claims 1, 3, and 4 are objected to because of the following informalities: Claims 1, 3, and 4 contain the term "the segment" which is confusing with regard to the definition of "Z". Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonya Wright, whose telephone number is (703) 308-4539. The examiner can normally be reached on Monday-Friday from 7:30 AM - 5:00 PM.

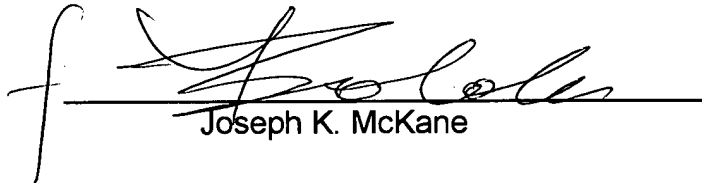
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph K. McKane, can be reached at (703) 308-4537. The Unofficial fax phone number for this Group is (703) 308-7921. The Official fax phone numbers for this Group are (703) 308-4556 or 305-3592.

When filing a FAX in Technology Center 1600, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

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Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [joseph.mckane@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not communicate with applicant via Internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is of record an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.

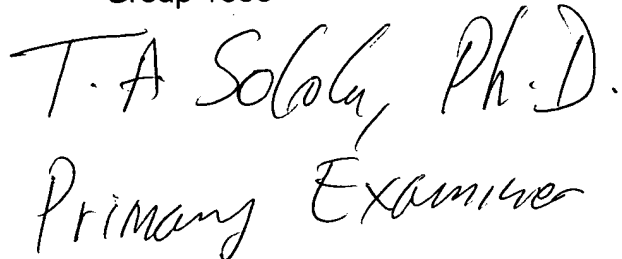
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-1235.



Joseph K. McKane

Supervisory Patent Examiner

Group 1600



T. A. Solola, Ph.D.
Primary Examiner

Sonya Wright

October 15, 2001